

CLAIMS

1. An inter-router adjustment method comprising:

an information request step of requesting router status information to all router devices belonging to a same
5 sub-network;

a step of acquiring the router status information and calculating priorities deciding a router device that is to become an operating status based on the router status information so that the plurality of router devices can operate
10 virtually as one router device; and

a step of deciding a first router device that is to become an operating status and a second router device to be in a standby status, according to the priorities.

2. An inter-router adjustment method comprising:

15 an information request step of requesting router status information to all router devices belonging to a same sub-network;

a step of acquiring the router status information and calculating priorities for deciding a router device that is
20 to become an operating status based on the router status information so that the plurality of router devices can operate virtually as one router device;

a step of transmitting the priorities calculated for the router devices respectively to the router devices; and

25 a step for a first router device which received the

priority to decide whether or not to become an operating status, depending upon the priority of its own and the priority of a second router device received from the second router device being in an operating status.

5 3. An inter-router adjustment method according to either claim 1 or claim 2, further including a step of adjusting the priorities between the router devices depending upon a significance of the router status information.

10 4. An inter-router adjustment method according to either claim 1 or claim 2, wherein request for the router status information is periodically made based on the information request step.

15 5. An inter-router adjustment method according to either claim 1 or claim 2, wherein request for the router status information is made according to a request from a communication device including the router devices connected to the same sub-network.

20 6. An inter-router adjustment method according to either claim 1 or claim 2, wherein calculating the priorities is made when there is a change in the router status information acquired.

25 7. An inter-router adjustment method according to either claim 1 or claim 2, wherein the router status information is at least any one of a line status, a processing burden and a battery remaining capacity of the router device itself.

8. A router priority calculation device comprising:
a router information gathering section for gathering
router status information of router devices belonging to a same
sub-network;

5 a priority calculating section for calculating
priorities deciding a router device that is to become an
operating status based on the router status information so that
a plurality of router devices can operate virtually as one
router device; and

10 a priority notifying section for notifying the priorities
calculated for the router devices respectively to the router
devices.

9. A router priority calculation device comprising:
a router information gathering section for gathering
15 router status information of the router devices belonging to
a same sub-network;

a priority calculating section for calculating
priorities deciding a router device that is to become an
operating status based on the router status information so that
20 a plurality of router devices can operate virtually as one
router device;

a master deciding section for deciding a first router
device that is to become an operating status and a second router
device that is to be in a standby status, according to the
25 priorities; and

a master notifying section for notifying information identifying the decided router device to the router device.

10. A router priority calculation device according to either claim 8 or claim 9, wherein the router information gathering section has a comparing section for comparing the router status information newly acquired with existing router status information, to instruct the priority calculating section to re-calculate a priority when the comparing section detects a difference in the router status information.

10 11. A router priority calculation device according to either claim 8 or claim 9, wherein the router information gathering section has an information request section for requesting the router status information to the router device.

12. A router priority calculation device according to 15 claim 11, wherein the router information gathering section has a timer, the information request section requesting the router status information when receiving a time-up notification from the timer.

13. A router priority calculation device according to 20 claim 11, wherein the router information gathering section further includes an update request receiving section for receiving an update request for the priority from a communication device including the router devices connected to the same sub-network.

25 the update request receiving section, when receiving the

update request, making a notification to the information request section whereby the information request section requests the router status information to the router device.

14. A router priority calculation device according to
5 either claim 8 or claim 9, wherein the router status information is at least any one of a line status, a processing burden and a battery remaining capacity of the router device itself.

15. A router device comprising:

a status notifying section for forwarding router status
10 information comprising at least any one of a line status, a process burden and a battery remaining capacity;

a priority receiving section for receiving a priority
deciding a router device that is to become an operating status
so that a plurality of router devices belonging to a same
15 sub-network can operate virtually as one router device; and

a master deciding section for deciding whether to become
an operating status or a standby status, according to the
priority received and a priority notified from a first router
device in an operating status.

20 16. A router device according to claim 15, wherein the
status notifying section forwards periodically the router
status information onto the sub-network.

17. A router device according to claim 15, further
including an information request receiving section for
25 receiving a request for the router status information, to

forward the router status information onto the sub-network depending upon the request the status notifying section received.

18. A router device according to claim 15, further-
5 including a status monitor section for monitoring a change in the router status information, the status monitor section, when detecting a change in the router status information, making a notification to the information notifying section whereby the information notifying section forwards a latest
10 router status information onto the sub-network.

19. A local network system comprising a router device according to any one of claims 15 to 18, and a router priority calculation device according to any one of claims 8 to 13.